What is Claimed:

1. A method for detecting biomolecules *in vivo*, the method comprising:

providing labeled binding molecules *in vivo* to tissue having biomolecules, wherein the labeled binding molecules specifically binds the biomolecules;

emitting a first optical radiation into the tissue *in vivo* to excite the labeled binding molecule bound to the biomolecule *in vivo*; and

detecting, *in vivo*, a second optical radiation emitted by the excited labeled binding molecule in response to the excitation thereof.

2. A method according to Claim 1, wherein the labeled binding molecules are fluorescently labeled antibodies.

3. A method according to Claim 1, wherein the biomolecule is a tumor-associated antigen.

4. A method according to Claim 1, wherein the biomolecule is a sigma-2 receptor.

5. A method according to Claim 1, wherein the detecting step comprises transmitting a signal associated with the second optical radiation to an *ex vivo* system.

6. A method according to Claim 1, wherein the step of exciting comprises emitting the first optical radiation through a bio-fouling tissue.

7. A method according to Claim 1, wherein the step of detecting comprises detecting the second optical radiation through a bio-fouling tissue.

8. A circuit for detecting biomolecules *in vivo*, the circuit comprising

an optical radiation source configured for *in vivo* use that emits first optical radiation;

an optical radiation detector configured for *in vivo* use that detects second optical radiation emitted by excited labeled binding molecules; and

a processor circuit, coupled to the optical radiation source and the optical radiation detector, that controls the emission of the first optical radiation and that receives an intensity signal associated with the intensity of the second optical radiation and transmits a signal associated with the intensity of the second optical radiation to an *ex vivo* system.

9. A circuit according to Claim 8, wherein the optical radiation source is selected from a group consisting of a high powered LED and a laser.

10. A circuit according to Claim 8, wherein the optical radiation detector is selected from a group consisting of a phototransistor, a photodiode, and a photomultiplier.

11. A circuit according to Claim 8, wherein the first optical radiation has a first frequency and the second optical radiation has a second frequency.

12. A circuit according to Claim 11, wherein the first frequency is greater than the second frequency.

13. A circuit according to Claim 8 further comprising:
an emission filter coupled to the optical radiation source; and
an absorption filter couple to the optical radiation detector.

14. A circuit according to Claim 8, further comprising:
an inductor coupled to the processor, wherein the inductor provides power to the circuit in response to a power signal received from the *ex vivo* system.

15. A circuit according to Claim 8, wherein the circuit is on a platform having a diameter of about 2mm.

16. A circuit according to Claim 8, wherein the signal is digitally encoded via the inductor.

17. A circuit according to Claim 8, wherein the circuit is coated with a biocompatible optical translucent layer.

18. A composition of matter comprising:

labeled binding molecules that are excited by optical radiation; and

a material that encapsulates the labeled binding molecules which is dissolved over time to release the labeled binding molecules.

19. A composition according to Claim 18, wherein the labeled binding molecules are fluorescently labeled antibodies.

20. A composition according to Claim 18, wherein the material comprises:

first and second portions that include the binding molecules; and

a separator portion that separates the first portion from the second portion.

21. A composition according to Claim 20, wherein the separator portion is less soluble in tissue than the first and second portions.

22. A composition according to Claim 21, wherein the first and second binding molecules are different.